

- Charge separators and container blow-out panels reduce the effects of unintended ignition.

MACS cost savings are:

- Storage and transportation requirements decrease up to 42 percent because all the modular charges are used.
- Every MACS container is opened without tools, and each has an extraction sleeve that doubles as a handling device, eliminating the need for special tools.
- Every container has separators between the charges that double as an extraction tool to lift charges out of a hot tube, without requiring special tools for extraction.
- Unit trainers can safely teach the MACS because it is easy to use and easy to train.

- The external containers can be recycled several times.

From the analyses, the log team's lessons learned resulted in:

- Early packaging design and engineering that enhanced performance.
- A better product, fielded faster and cheaper without changing basic performance.

The MACS training video shows how the improved packaging advances product performance. Ask for a copy of the 28-minute video at MACSmail@pica.army.mil.

So what can The Rooster do for you? The examples described above are just a few of the innovative solutions developed by RoosterLOG logistics services. More information is available by

contacting LRED at RoosterLOG@pica.army.mil. LRED supplies individuals or teams to support specific DOD efforts. Those solution specialists involve the whole directorate for useful input. Teams and individuals also consult with product developers in all services to suggest an array of possible innovations. Ask about our Flash Consulting Service for a low-cost, quick look.

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Logistics — Back to Basics, but With More Speed and Precision

CSM Tyler Walker II



You don't have to go halfway around the world to a combat zone to appreciate logistics. You can just go home to recognize that the basics we all expect and need — food, clothing and shelter — really matter. They mean survival. Disasters, such as floods, fires and earthquakes, really shed a spotlight on basics, regardless of whom or where they strike. In September 2003, as Hurricane Isabel approached the Nation's capital, the behavior of thousands of people could be tracked as they went to grocery stores to gather food and then battened down their homes and businesses to ensure they would be sheltered from the turbulent effects of wind and rain. A month later, as the Santa Ana winds swept a firestorm across much of Southern California, people sought shelter in stadiums and local schools while firefighters from across the state battled to save the land and their homes.



An important part of the communications and logistics equation is knowing where our equipment is throughout the supply chain. Radio frequency (RF) tags were one of the ways AMC did that during *OIF* and *Operation Enduring Freedom*. While nothing is perfect, RF tags dramatically improved asset visibility and helped get the right material to the right units.

Often, war's effects are similar to effects from natural disasters, underscoring our reliance on basic needs. As our lighter, more deployable Army faces international crises that erupt like lightning, it's apparent that we need to be faster in getting the basics to our warfighters. Much of that strength comes from the U.S. Army Reserve (USAR) and contractors. So let's take a look at the basics, where they are and maybe where they need to be.

Without a doubt, food is at the top of the list. The scientists and nutritionists in our labs have studied food and the physiological needs of every human living and working in harsh environments in highly active operations. To get the nutrients they need, soldiers have to eat a lot of food — at least two Meals, Ready-to-Eat (MREs) per day. If we could make those rations lighter, we could substantially cut the weight of a soldier's basic load. Food is one thing from the soldier's daily basic needs that we must lighten without sacrificing quality and nutrition.

We all know how MREs have improved over the years, in variety and quality. Future soldiers will be getting the First Strike Ration, food in a pouch made of

high-energy chow that is designed to replace three MREs during the first three days of operations. It will weigh 50 percent less than daily ration MREs. Special Forces troops liked them so much, they special ordered as many as the Food Engineering Lab at Natick could supply, earning the Soldier's "seal of approval." But it's well known that despite their exceptional quality, ready-to-eat meals can get old after a while. Additionally, it's hard to find a cook in the Active Army these days, so we are becoming increasingly dependent on contractors on the battlefield providing fresh-cooked meals.

Contractors are now setting up and managing Soldier field dining halls. The Logistics Civil Augmentation Program (LOGCAP) uses a team approach to provide services for which the Army no longer has organic resources, thereby relieving soldiers of mundane daily chores so they can concentrate on their primary field duties. Contractors supply the closest thing to home cooking you can find in the field. In Iraq, they set up more than 30 dining facilities with the goal of preparing at least two hot meals every day for every soldier in Iraq. The Army Materiel Command (AMC) oversees all

LOGCAP contracts. Many soldiers and civilians have met AMC USAR logisticians in Southwest Asia, sent there to act as liaisons between contractors and combatant commanders.

Individual soldier equipment and clothing, including boots, are as important as each individual soldier. AMC engineers are working to get new products that withstand the elements. Boots can affect oxygen consumption, fatigue and marksmanship, in addition to lower leg and ankle injuries. Therefore, clothing and equipment must be designed to protect our warfighters and help them do their jobs more efficiently. The U.S. Marine Corps selected an Army-developed product — the new Infantry Combat Boot — because of its improved heat insulation, shock attenuation, pressure distribution, water penetration, flex resistance and dynamic stiffness to enhance performance, safety, comfort and durability.

Another important soldier equipment item that proves its worth every day is the special Interceptor body armor being issued to frontline soldiers. The number of soldiers' lives saved by this



Force Provider, sometimes called "city in a box," is just one of the ways that the Army Materiel Command provides some of the basic necessities of life to soldiers — even in the most extreme conditions. Shipped to some of the most remote areas around the world, each set of sea containers holds enough equipment to comfortably house 550 people — put enough of them together and you have a small city with showers, mess halls, post offices, fuel points, running water, lights, chapels and morale, welfare and recreation facilities.



Whether MREs or hot meals from a field kitchen, food is one of those basics that AMC provides not just to Soldiers, but to U.S. Marines as shown here.

amazing piece of equipment is now well known. It has stopped powerful AK47 ammunition many times, allowing soldiers to continue the fight and get home safely. I even met a soldier who lived after being hit by a rocket-propelled grenade. Soldiers face the prospect of being placed in harm's way every day. We accept that. It's good to know technology is on our side.

Early in the Afghanistan conflict, the Taliban retreated to their mountain hideouts and U.S. soldiers went in after them. What they found were hundreds of caves and wells dug deep into the mountains where Taliban fighters had stashed guns and ammunition to keep on fighting. At first, soldiers ventured down those wells not knowing what might be below them — enemy soldiers, weapons caches, booby traps or maybe nothing at all. Commanders came to AMC and asked for something that would help them look into the wells before sending Soldiers in. Within just a few weeks, AMC engineers and the Rapid Equipping Force had developed and delivered special minicameras that could be lowered into the wells to give soldiers a 360-degree view of the environment below. That's the kind of responsiveness AMC's labs and research centers strive for every day — to get the technology Soldiers need into the field, fast.

Shelter is another basic need for soldiers in the field, especially in underdeveloped regions where even basic things like a dry, solid floor, a roof, running water and electricity can be rare or nonexistent. We are all now familiar with the miserable conditions Soldiers and Army civilians faced in the early months of *Operation Iraqi Freedom (OIF)*. They found shelter in abandoned buildings and bombed out government and public facilities — and those who found those dilapidated shelters were the lucky ones.

Force Provider, also known as a “city in a box,” was designed to give Soldiers the shelter they need, when and where they need it. A set of standard 20-foot containers, 80 to 104 depending on the type of power source supported, have been shipped by sea and surface to some of the most rugged and remote places on Earth. These highly mobile minicities have everything from beds to baths, laundry rooms, chapels, recreation centers, sanitation and enough power for the 550 troops supported by each set. AMC has sent several Force Provider sets to Iraq to meet basic Soldier needs. Several lessons learned from logistics support during combat operations in Iraq tell us that we must be ready for anything. Field logisticians earned a

reputation for being innovative, adaptive and forward thinking for anticipating combatant commanders' needs. The incredible speed of operations during *OIF*, while unexpected, depicts chaos on future battlefields and how the Army must plan to operate in underdeveloped areas and degraded urban environments. No longer will field logisticians be able to supply forward. They will need to shoot, move and communicate like the combat arms Soldiers they support. The watchword in today's military environment has to be “every soldier is an infantryman.”

And speaking of communicating, logistics soldiers must have the same communications capabilities as their combat customers if they are to be more responsive. We found out from *OIF*'s high operations tempo that to get the right parts and equipment to the right places when needed, logistics units must communicate better. The truth be told, if there was one area that was “broken” during the fighting in Iraq, it was communications. But we're working on that too and, in the future, we will know where the shortages are and how best to fill them quickly and safely. We also know that preparing for the last war does not lead to success in the next one. As logisticians, we can't afford to miss the lessons learned from these recent operations. And we must never lose focus on the basics.

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